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ABSTRACT

One constructivist approach to assessing student learning is the use of portfolios. The contents of a portfolio demonstrate what a student knows and can do. The portfolio indicates actual products and processes a student has developed, as exemplified in the description of the contents of a student portfolio in a teaching methods course. Portfolios may also be used to extend the scope of the curriculum. The portfolio may be the major data course for a grade, but pride of ownership and achievement may motivate the student to learn more. A portfolio can be an important tool in linking course objectives, learning opportunities, and assessment procedures. (SLD)

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Using Portfolios in Higher Education

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USING PORTFOLIOS IN HIGHER EDUCATION

Portfolio use to assess student achievement in higher education can be an alternative or an additional procedure to assess learner progress in university coursework. Philosophy of portfolio use stresses assessing students in ongoing experiences and provide instructor assistance to students to achieve more optimally within an ongoing course. Portfolio development by the student and instructor assistance needs to be emphasized throughout the time the course is being pursued.

Criticisms, whether warranted or unwarranted, state that higher education is in need of reform. Teacher education students, for example, are not being educated as well as they could be. It is difficult to know if any student is achieving as well as he/she could be. However, professional instructors want the highest attainment possible from each student in terms of what is relevant to learn.

Traditionally, instructors test students to notice achievement. Multiple choice test items tend to appear on many tests. These competed tests by students may be machine scored rather quickly. From the resulting printout, the instructor notices which test items students tended to do well on and which ones generally were responded to incorrectly. The instructor might then emphasize what were weaknesses in student responses with attempts at remediation in future class sessions. Item analysis then becomes important in evaluation of test results. Perhaps, the instructor notices weakly worded test items which need revision or omission If all, or nearly all, students respond incorrectly to a test item, then analysis of that item needs to be forthcoming. Selected test items may then need to be rewritten. If all or nearly all of the students in class responded correctly to a test item, perhaps that item is too easy when truly measuring learner achievement.

Test results provide numerical scores, such as

1. the per cent of correct responses.
2. percentile ranks.
3. stanine scores,
4. standard deviation analysis.
5. rank order of the involved student.

Numerical results may mean little unless remediation of what was missed on a test by students is emphasized in an immediate future session. The remediation statements covered in class should come as soon as possible after the test results have been obtained by the instructor. Thus, assessment and instruction become one, not separate entities (Ediger, 2000, 503-505).

Teaching and learning may well be restructured when assessment methods are improved upon and test results are used to improve

instruction. It behooves each university instructor or to write quality test items that truly do measure student achievement. The following are weaknesses of multiple choice test items written by instructors in higher education:

1. vague, hazy test items in that students do not know what is wanted for a response. Guessing by students pertaining to the meaning of test items will lower the reliability of the total test.
2. an inadequate number of test items; students might then not be able to indicate the adequateness of what has been learned.
3. validity is lacking in that students have not had opportunities to learn that which is related to what is on the test.
4. too many items on a test may make for haste in responding and a lack of student chances of completing the entire test. The student might then not have time to adequately reflect upon different test items.
5. trivia is being measured as compared to that which is salient (Ediger, 1994, 169-174).

In addition to multiple choice items, university instructors also give easy tests frequently to ascertain student achievement. Weaknesses in writing essay tests include the following:

1. essay items are not adequately delimited. Thus, an entire book might be written as a response to one item. The converse is also true in that an essay test item is so narrow in scope in that a fact may be written as an answer. Essay items should require deliberation and problem solving, not recall of factual information.
2. clarity is not in evidence to ascertain what is desired in terms of a possible answer. This lowers the possibility of having an appropriate reliability for the essay test.
3. essay items do not reflect directly upon what has been taught in the curriculum.
4. items in the test are not equally weighted in terms of different topics covered in the course.
5. validity is not in evidence since one or more items do not relate to the objectives of the course (Ediger, 2000, Chapter Ten).

For essay item scoring, the instructor should have a key with desired answers written down for each response to a numbered item. The chances are when scoring the test that consistency in assessment will then more likely be in evidence. Thus, the possibilities of a student saying to the instructor, "You gave credit to Bill for giving this same answer in test item 4 that you marked as being incorrect on my essay test paper" Even with the scoring key developed by the instructor prior to assessing each essay item, the reliability will not be as high as is true of multiple choice test results. Why? More subjectivity is involved in scoring an essay test as compared to machine scoring of multiple choice

test items. When writing multiple choice test items, subjectivity is involved in choosing subject matter content since other information could have been chosen for the writing of these essay test items. But with the use of the same key in scoring, objectivity in machine scored test results is in the offing. With scoring of essay test responses, if two or more scorers would do the scoring of the same student's test results, there definitely will be disagreements on how many score points should be given for each correct response within the broad framework of what is desired by the instructor. Multiply this for each total essay test and for all the students in class! Should essay tests then not be given to assess student achievement? They should definitely be given to ascertain how well students are doing in a course. By following appropriate guidelines in the writing of essay tests and by having a scoring key developed prior to doing the actual assessment, the results should be increasingly fair to the student. The instructor needs to be highly knowledgeable about subject matter content to be taught so that credit may be given on a test that came from a good creative response of the student. Then too, higher levels of cognition may be stressed in essay tests that are lacking too frequently in multiple choice testing. Higher levels of cognition include critical and creative thinking as well as synthesizing information.

Too frequently, multiple choice test items are criticized for

1. testing on factual information or the lowest level of cognition.
2. testing on isolated bits of subject matter.
3. testing on items which do not relate sequentially to each other.
4. testing and immediate recall of information become one concept.
5. testing and numerical results in making comparisons among individuals is paramount (See Salvia and Ysseldyke, 1995).

Philosophy of Constructivism and Portfolios

To minimize weaknesses in testing to notice student achievement, the philosophy of constructivism was brought in. Constructivism stresses each student develop a portfolio of achievements within one or more courses. The contents in a portfolio demonstrate what a students knows and can do. The scope here goes much further than testing and student's receiving a numerical score. The portfolio indicates actual products and processes develop by a student individually. The portfolio may be kept and shown to employers after the student has graduated from the university. What might a student put into a portfolio dealing with a methods of teaching course?

1. required summaries of periodical articles as they relate to the ongoing course being taken.
2. outlines of lecture notes taking in class.

3. snapshots of teaching aids made to use later in student teaching.

4. cassette recordings of reports given in class.

5. video-tapes of committee work engaged in emphasizing cooperative learning within a committee. Video taping of a mini-lesson taught in class.

6. self evaluation of personal progress made in class.

7. test results from tests taken throughout the duration of the class sessions.

8. a term paper developed as a part of the course.

9. self monitoring in listing what has been learned as well as what is left to learn in the course.

10. journal and diary entries to indicate accomplishments and feelings developed during the course (See Ediger, 1995, Chapter Nine).

Ongoing and continuous assessment is important in developing the curriculum. In addition to testing, portfolios may be used to extend the scope of content when including products/processes of student achievement. Portfolios are holistic in that they reveal, for example, the complete summaries of periodical articles written by a student. Or, the actual outline of lecture notes may be open to viewing by the involved instructor, future employees, and parents. The portfolio may provide the major data source in determining the grade for the course as given by the instructor. The student may view the portfolio contents as being ongoing and continues to review what has been learned previously. Pride of portfolio ownership and achievement may provide additional goals to motivate student behavior in learning. Contextualism stresses that portfolio content is more important than standardized test scores for any course taken by the student. The contents are also more important than tests taken during course duration. Why? The items in a portfolio represent daily work completed by a student. Test scores are not adequate to show what has been learned since a numeral is provided to show the results, such as a percentile. A percentile is a numeral and does not tell much in terms of specific student achievement, such as evaluating the quality of a student's journal article summaries.

Some pointers to use in developing a portfolio are the following:

1. it should not be too voluminous, since an excessive number of entries makes a difficult situation in appraising each, especially if class sizes are large in number. Ideally it is good to have two professionals check each portfolio to notice agreement on quality. Interscorer reliability is important in the evaluation process. Rubrics may be developed to increase reliability in appraising each portfolio.

2. the portfolio needs to be comprehensive in covering what has been learned and taught.

3. a table of contents should be developed for each portfolio.

4. entries in a portfolio need to pinpoint objectives achieved in a course. Portfolios relate directly to the objectives to be achieved.

5. the contents of a portfolio need to stress clarity in each entry. Thus, an evaluator may assess the meaning of subject matter in the different portfolio entries. Vague, hazy content has no purpose in a portfolio (See, for example, Geography Education Standards Project, 1994).

Conclusion

University instructors need to study, evaluate, and use innovative procedures in assessing student achievement. When using improved means of assessing student achievement, the instructor receives feedback on the quality of his/her teaching. Improved instruction should be an end result.

The benefits of quality approaches in assessment aid students in achieving at a more optimal rate. The student receives feedback from assessment results. In addition to testing, the student might well benefit from portfolios in the following ways:

1. a considerable amount of review is involved when developing a portfolio.
2. reflecting upon what has been accomplished when developing a portfolio assists a student to retain what has been achieved.
3. self monitoring in portfolio developing should make for improved decision making.
4. personal responsibility for portfolio development emphasizes student accountability.
5. each entry needs to be diagnosed by the student. Remediation or improved entries should be an end result.

Students need to achieve as optimally as possible. The objectives, learning opportunities, and assessment procedures should be related and be not separate entities. Thus, the objectives may be achieved through learning opportunities. To ascertain if the objectives have been attained, quality assessment procedures must be used. Assessment procedures should involve students to be active participants, not passive recipients. Interest in achieving quality in assessment results should be a focal point for each student. Thus, motivation for learning is of utmost importance. The portfolio is there as a permanent entity to show to responsible persons what has been accomplished within a course. A portfolio might well be shown to a future employer to document what has been learned.

A further problem in assessing student achievement emphasizes multiple intelligences theory whereby each learner should have possibilities of being evaluated based on the intelligence possessed.

Gardner (1993) identified eight different intelligences that may be used in determining how a student should be assessed. The strongest intelligence possessed should then be considered in the evaluation process for that individual student. Verbal intelligence, being one of the eight, stresses the use of reading test items and writing responses such as in essay testing. There are seven additional ways of responding to show what has been learned.

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